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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/556,328      | 04/24/2000  | Hyun-doo Shin        | Q54152              | 7648             |

7590 03/25/2004

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| EXAMINER |
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KASSA, YOSEF

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| ART UNIT | PAPER NUMBER |
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2625

DATE MAILED: 03/25/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/556,328

**Applicant(s)**

SHIN ET AL.

**Examiner**

YOSEF KASSA

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01/08/2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 17-34, 37, 38, 41, 44 and 47-49 is/are rejected.
- 7) ☒ Claim(s) 7-16, 22, 27, 35-37, 39-43, 45 and 46 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Arguments***

1. Applicant's arguments/amendment, (page 2-20) filed on January 08, 2004, with respect to claims 1-6, 17-34, 37, 38, 44 and 47-49 under Mitsuyama et al (U.S. Patent 5,768,412) and Nishikawa (U.S. Patent 6,587,222) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ishihara et al et al (U.S. Patent 6,124,945).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 17-34, 37, 38, 44 and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuyama et al (5,768,412), and further in view of Ishihara et al et al (U.S. Patent 6,124,945).

With regard to claim 1, Mitsuyama et al discloses color image segmentation method for segmenting a color image into a plurality of regions (see col. 3, lines 14-21); obtaining a converted image by converting the first value into a value of a

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predetermined scale (see col. 18, lines 49-65), and segmenting the converted image (see col. 19, line 20-27).

Mitsuyama et al did not explicitly call for calculating a first value representing a degree of difference between a pixel and peripheral pixels from the color of peripheral pixels based on a plurality of pixel values of an input image, wherein the color includes levels of one color. In the same field of endeavor, however, Ishihara et al et al (col. 3, lines 45-54) teach this feature. At the time of the invention, it would have been obvious to incorporate the teaching of Ishihara et al color image process into Mitsuyama et al system. The motivation doing so is to reduce a color deviation in a boundary portion when a color pixel is converted to a halftone code.

With regard to claim 2, Mitsuyama et al discloses segments the converted image based on a region growing method (see col. 18, lines 49-53).

With regard to claim 3, Mitsuyama et al discloses quantizing pixel values of the input image into a predetermined number of representative quantized pixel values (see col. 3, lines 27-33 of Mitsuyama et al).

With regard claim 4, Mitsuyama et al discloses wherein the representative pixel values consist of 10-20 values (see Fig. 8 of Mitsuyama et al, comprises pixel values of 10-20 at the scale of between 0 to 100 pixels).

With regard to claim 5, Mitsuyama et al discloses defining a window containing a center pixel (see Fig. 1, BG); and calculating a second value representing the degree of difference between a pixel and peripheral pixels from the color of peripheral pixels with respect to pixels in the defined window (see Fig. 1, B, A1 and A2).

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Claim 6 is similarly analyzed as claim 5.

With regard to claim 17, Mitsuyama et al discloses the predetermined scale is a gray scale having 0 and 255 (see col. 9, lines 25-33).

Claims 18-31 are similarly analyzed as claim 17 above.

Claim 32 is similarly analyzed as claim 1 above.

Claim 34 is similarly analyzed as claims 1, 2 and 3 above.

Claim 37 is similarly analyzed as claim 17.

Claim 38 is similarly analyzed as claim 34 above.

Claim 44 is similarly analyzed as claim 5 above.

Claims 47-49 are similarly analyzed as claim 17 above.

3. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuyama et al (U.S. Patent 5,768,412) and Ishihara et al et al (U.S. Patent 6,124,945) as applied to claims 1-6, 17-34, 37, 38, 41, 44 and 47-49, and further in view of Zhou (U.S. Patent 6,353,700).

With regard to claim 33, while Mitsuyama et al and Nishikawa disclosed the color image processing, they are silent about an image processing method complies with MPEG-7. In the same field of endeavor, However, Zhou (see col. 4, lines 1-5) teaches this feature. At the time of the invention, it would have been obvious to incorporate the teaching of Zhou's color image processing system into Mitsuyama et al and Nishikawa systems. The motivation for doing so is to provide a system for playing an MPEG data file Backward with a linear speed (see col. 4, lines 18-24 of Zhou).

***Allowable Subject Matter***

4. Claims 7-16, 22, 27, 35, 36, 37, 39, 40, 41, 42, 43, 45 and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Other Prior Art Cited***

5. The prior art made of record and not relied upon is considered pertinent to applicant disclosure.

US Patent No. (6,330,008) to Razdow et al discloses apparatuses and methods for...

US Patent No. (6,134,347) to Niwamoto discloses image filming and compression system...

US Patent No. (6,184,940) to Sano discloses imaging apparatus with dual white balance...

US Patent No. (5,767,992) to Tanaka et al discloses color reproducing method and apparatus for...

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (703) 306-5918. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

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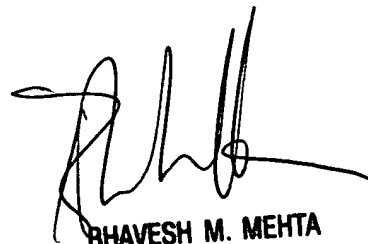
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH MEHTA can be reached on (703) 308-5246. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communication and (703) 872-9306 for after Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (703) 306-5631. The group receptionist number for TC 2600 is (703) 305-4700.

**PATENT EXAMINER**

Yosef Kassa

03/19/04.



**BHAVESH M. MEHTA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**